Figure 1

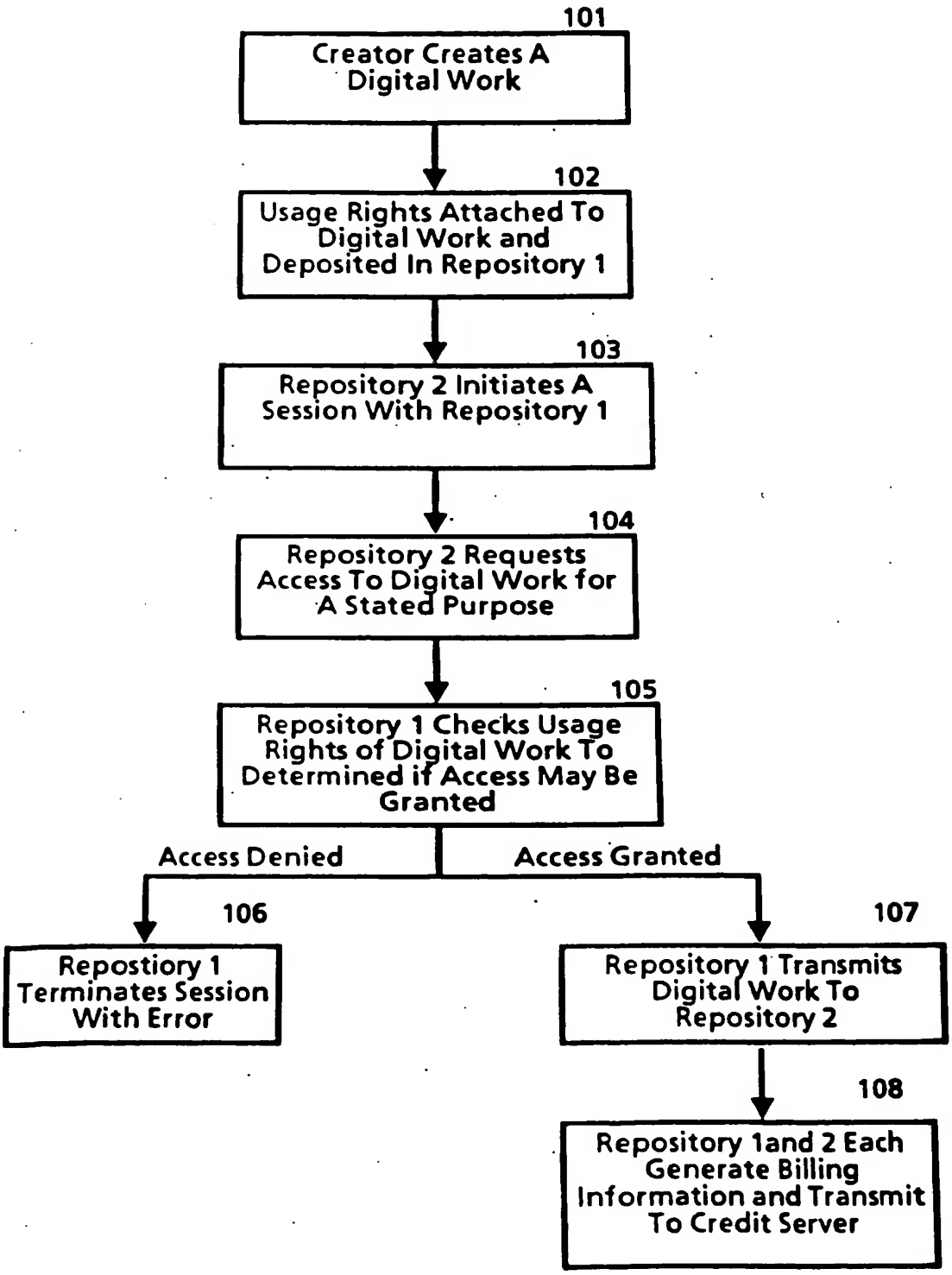

101
Creator Creates A Digital Work
102
Usage Rights Attached To Digital Work and Deposited In Repository 1
103
Repository 2 Initiates A Session With Repository 1
104
Repository 2 Requests Access To Digital Work for A Stated Purpose
105
Repository 1 Checks Usage Rights of Digital Work To Determined if Access May Be Granted
Access Denied
Access Granted
106
Repostiory 1 Terminates Session With Error
107
Repository 1 Transmits Digital Work To Repository 2
108
Repository 1and 2 Each Generate Billing Information and Transmit To Credit Server

Figure 2

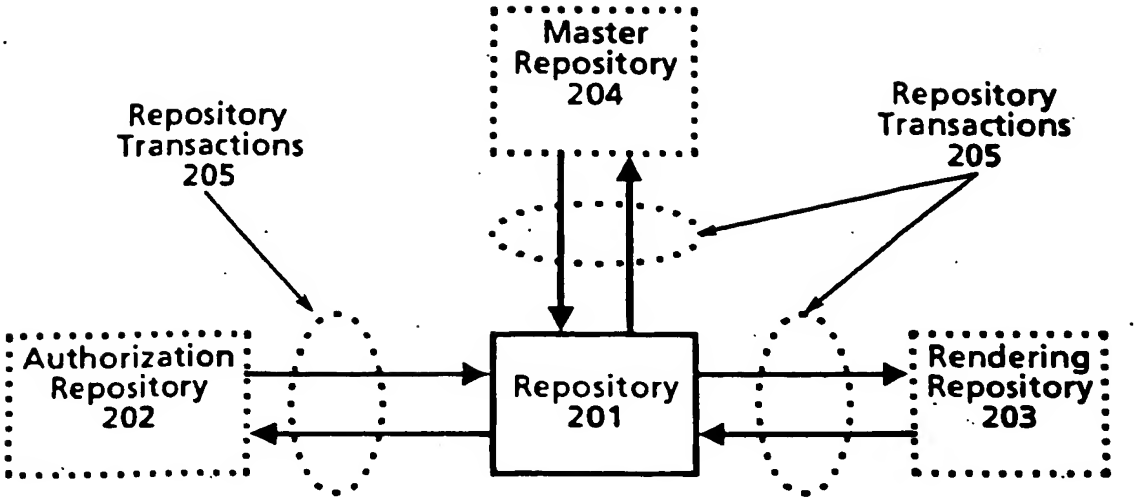


Figure 3

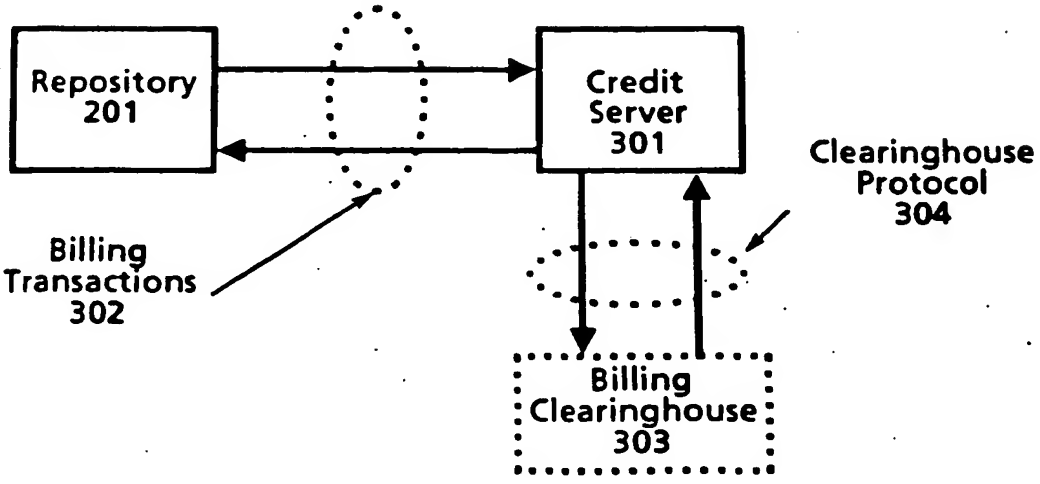


Figure 4a

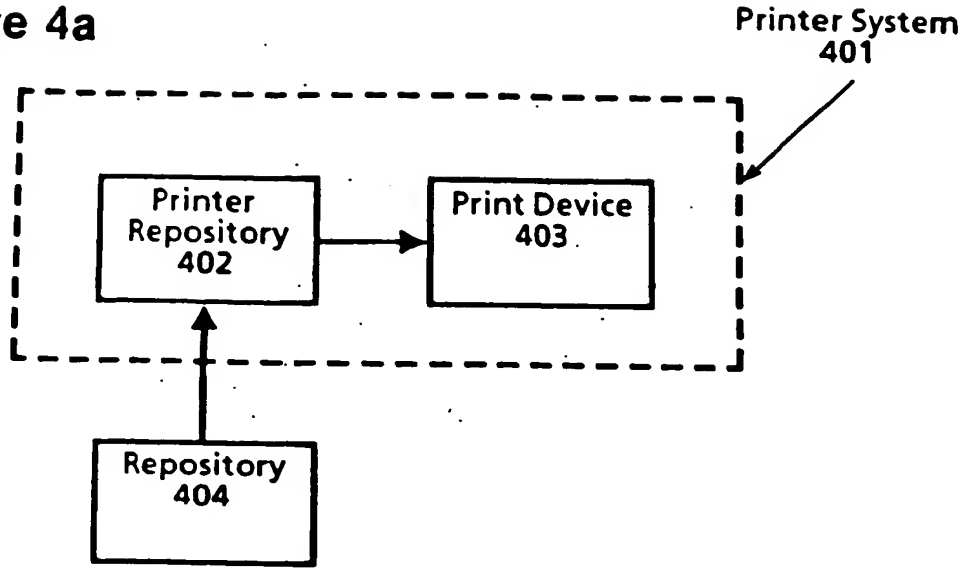
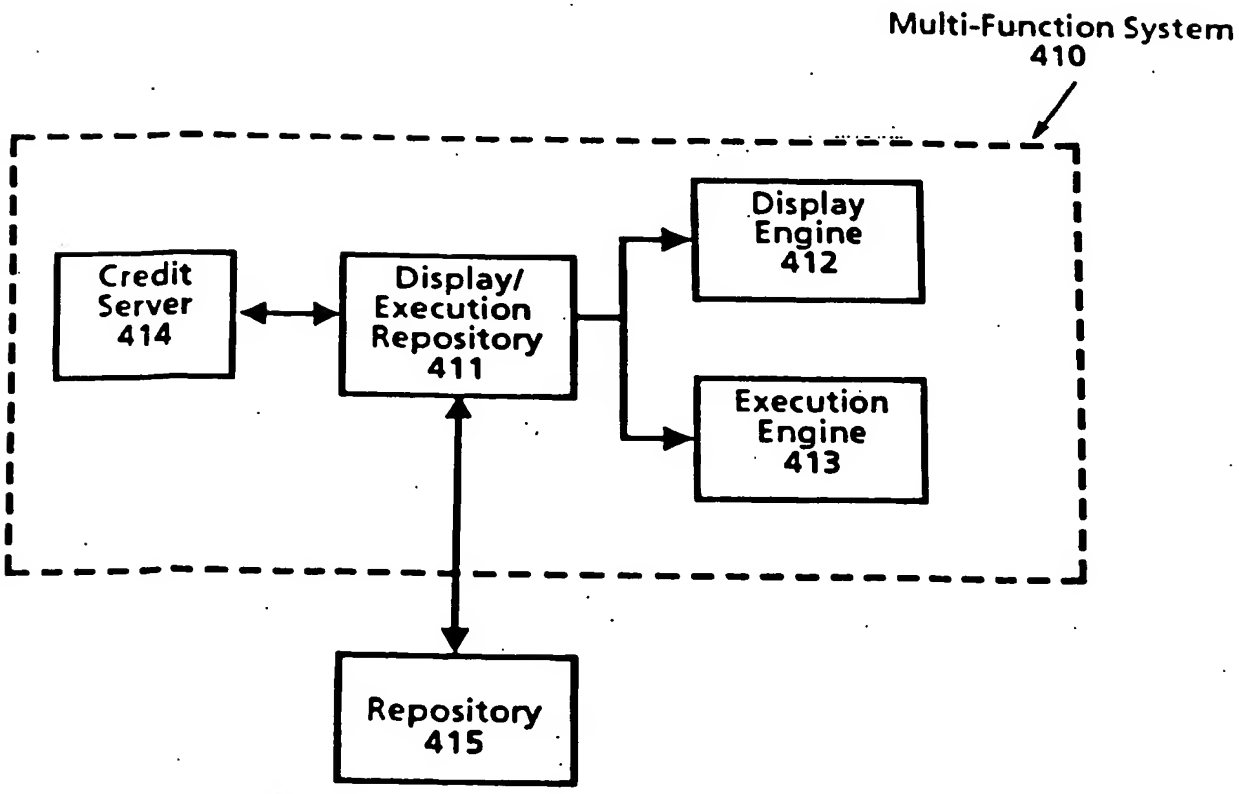


Figure 4b



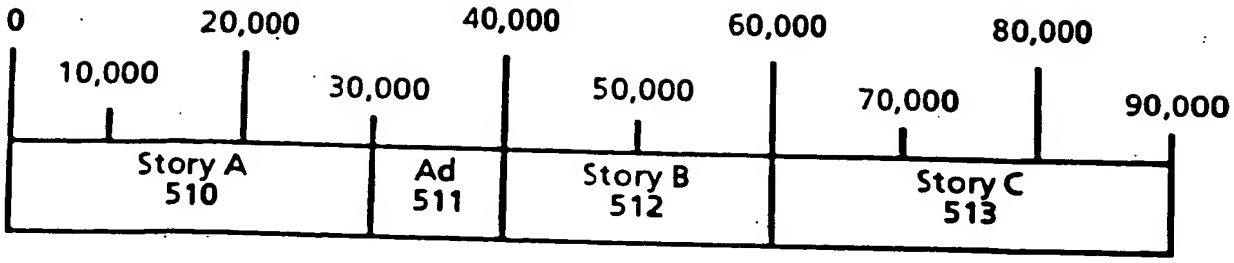


Figure 5

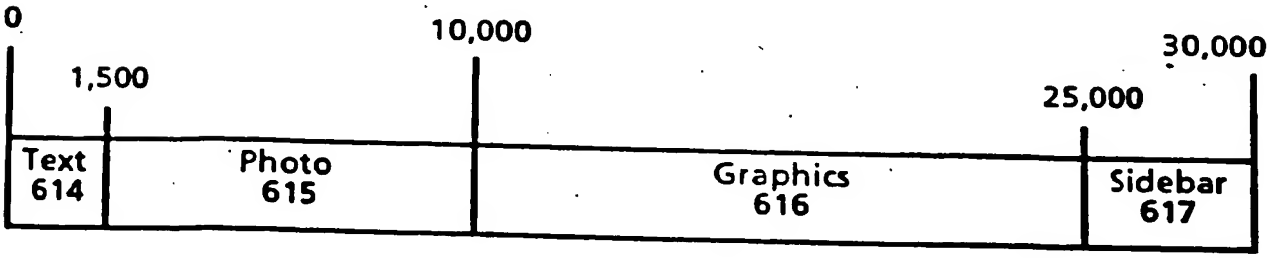


Figure 6

Figure 7

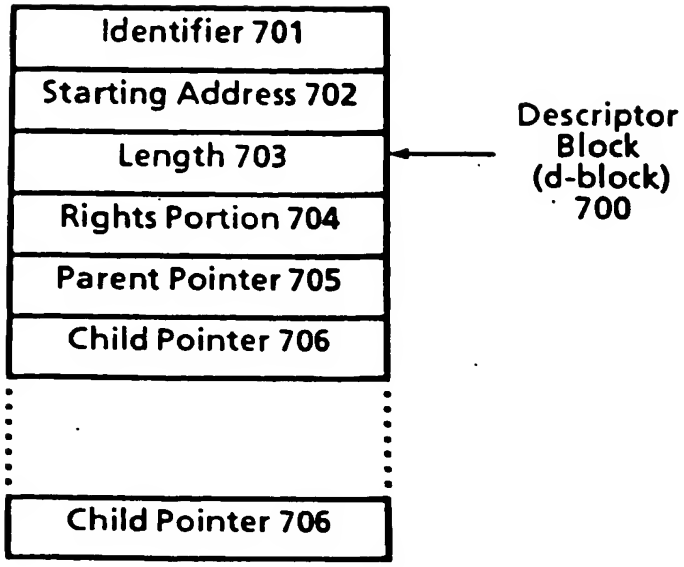


Figure 8

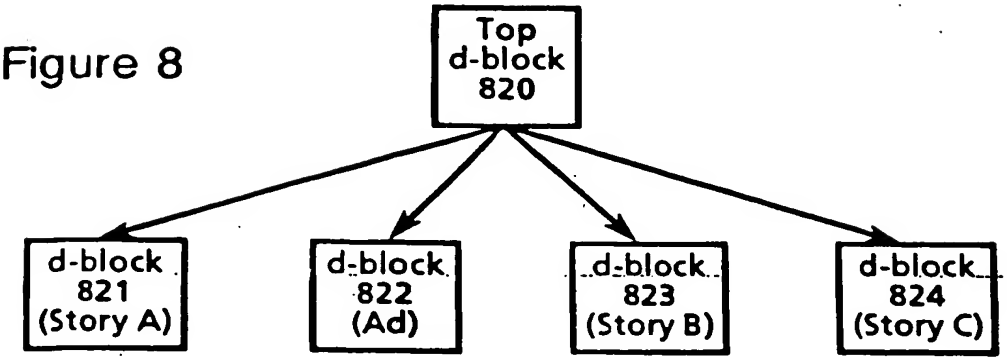


Figure 9

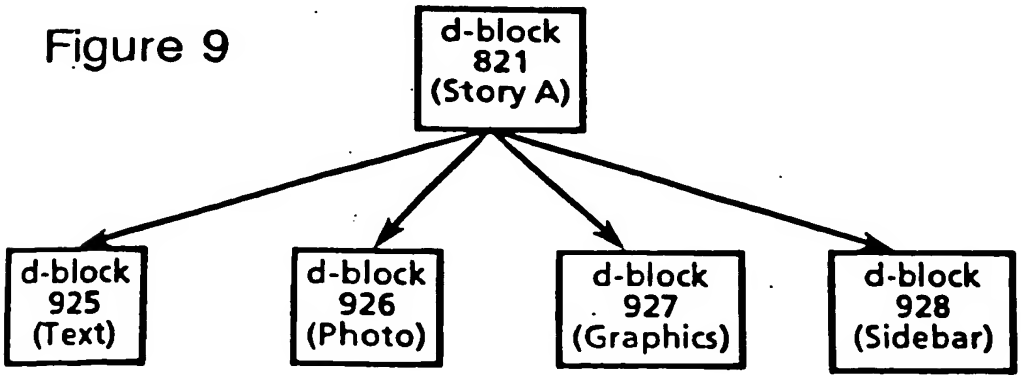


Figure 10

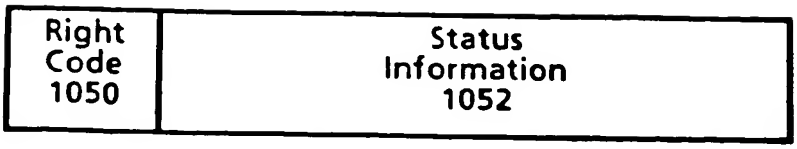


Figure 14

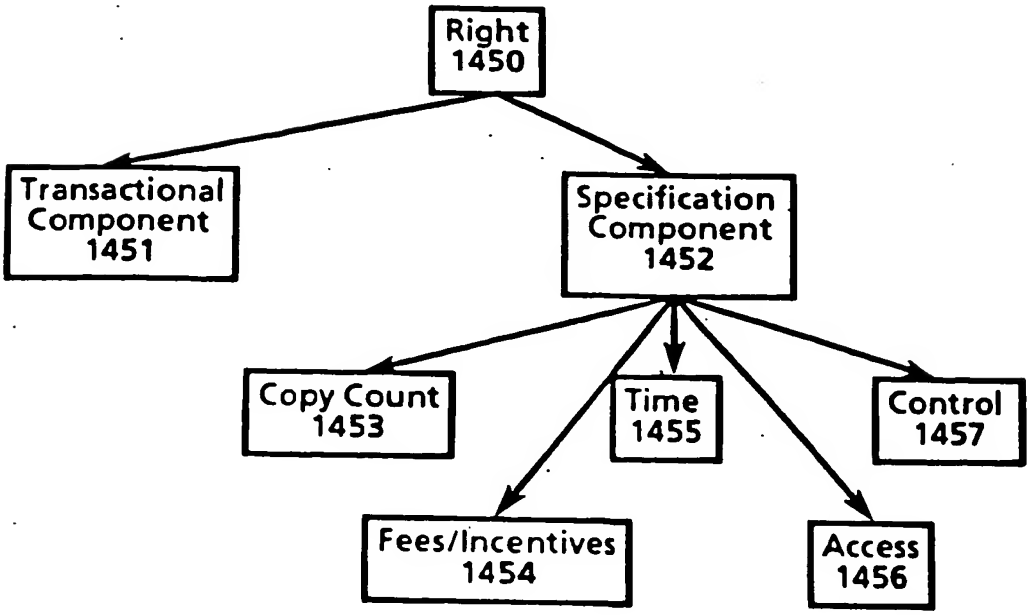


Figure 11

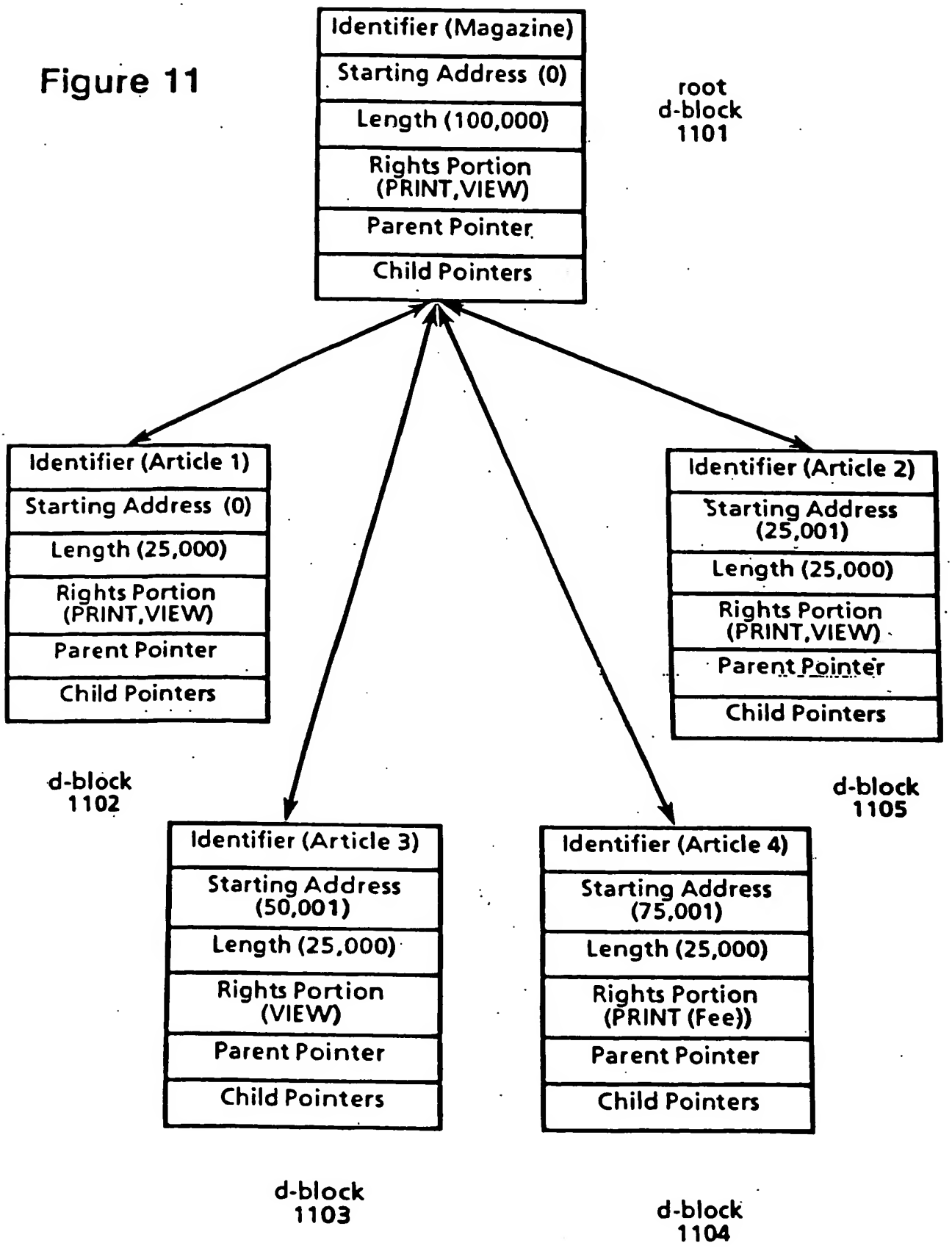

Identifier (Magazine)
Starting Address (0)
Length (100,000)
Rights Portion (PRINT,VIEW)
Parent Pointer
Child Pointers
root d-block 1101
Identifier (Article 1)
Starting Address (0)
Length (25,000)
Rights Portion (PRINT,VIEW)
Parent Pointer
Child Pointers
d-block 1102
Identifier (Article 2)
Starting Address (25,001)
Length (25,000)
Rights Portion (PRINT,VIEW)
Parent Pointer
Child Pointers
d-block 1105
Identifier (Article 3)
Starting Address (50,001)
Length (25,000)
Rights Portion (VIEW)
Parent Pointer
Child Pointers
d-block 1103
Identifier (Article 4)
Starting Address (75,001)
Length (25,000)
Rights Portion (PRINT (Fee))
Parent Pointer
Child Pointers
d-block 1104

Figure 12

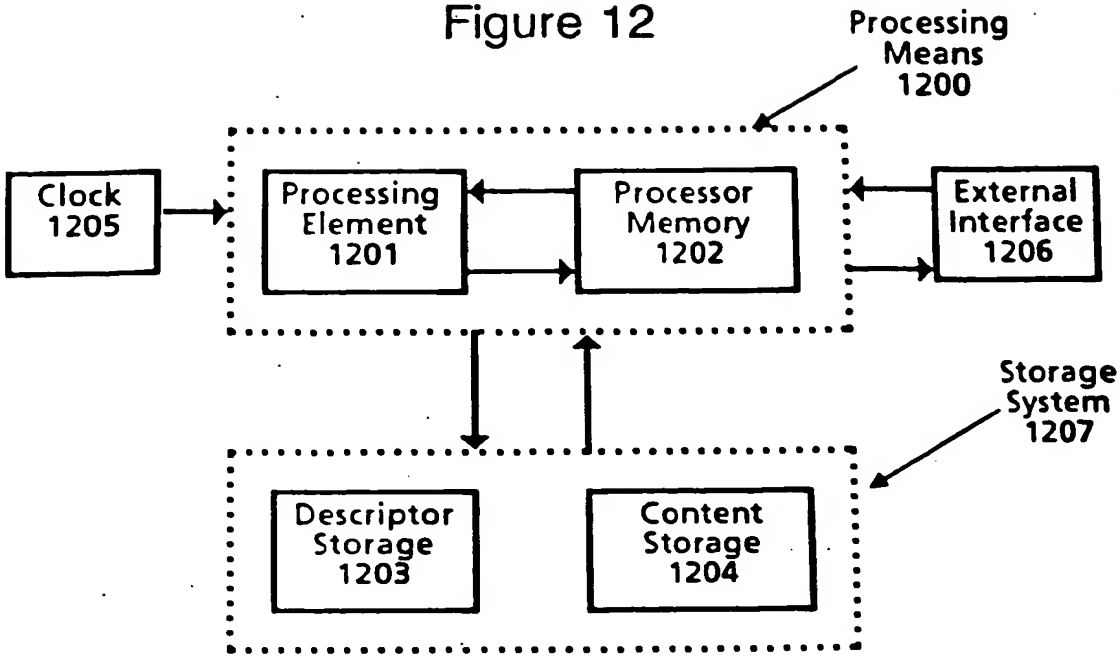


Figure 13

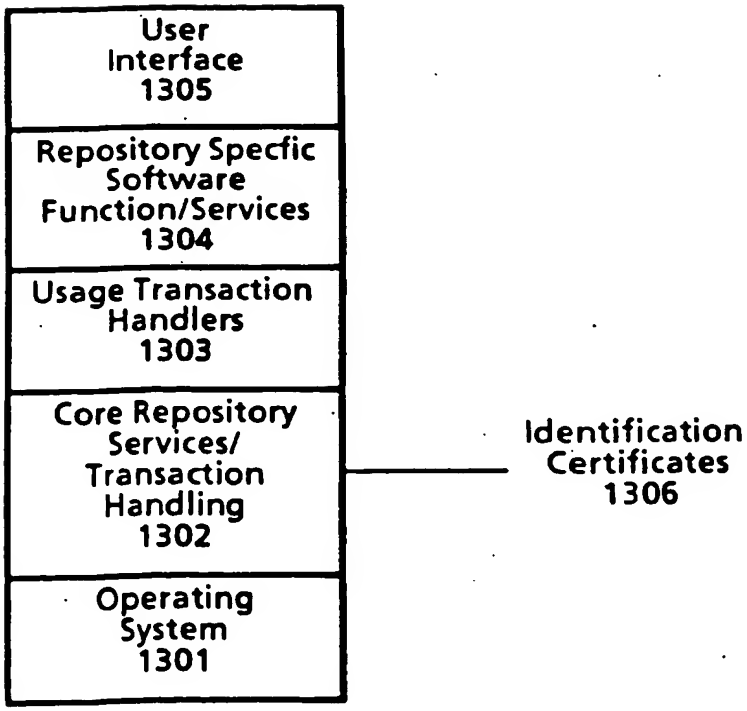


FIGURE 15

1501 ~ Digital Work Rights:= (Rights*)

1502 ~ Right := (Right-Code {Copy-Count} {Control-Spec} {Time-Spec } {Access-Spec} {Fee-Spec})

1503 ~ Right-Code := Render-Code | Transport-Code | File-Management-Code| Derivative-Works- Code | Configuration-Code

1504 ~ Render-Code := [Play : {Player: Player-ID}.| Print: {Printer: Printer-ID}]

1505 ~ Transport-Code := [Copy | Transfer | Loan {Remaining-Rights: Next-Set-of-Rights}]{(Next-Copy-Rights: Next-Set-of-Rights)}

1506 ~ File-Management-Code := Backup {Back-Up-Copy-Rights: Next-Set-of-Rights} | Restore | Delete | Folder | Directory {Name: Hide-Local | Hide-Remote} {Parts: Hide-Local | Hide-Remote}

1507 ~ Derivative-Works-Code := [Extract | Embed | Edit{Process: Process-ID}] {Next-Copy-Rights : Next-Set-of Rights}

1508 ~ Configuration-Code := Install | Uninstall

1509 ~ Next-Set-of-Rights := {(Add: Set-Of-Rights)} {(Delete: Set-Of-Rights)} {(Replace: Set-Of-Rights)}{(Keep: Set-Of-Rights)}

1510 ~ Copy-Count := (Copies:positive-integer | 0 | Unlimited)

1511 ~ Control-Spec := (Control: {Restrictable | Unrestrictable} {Unchargeable | Chargeable})

1512 ~ Time-Spec := ({Fixed-Interval | Sliding-Interval | Meter-Time} Until: Expiration-Date)

1513 ~ Fixed-Interval := From: Start-Time

1514 ~ Sliding-Interval := Interval: Use-Duration

1516 ~ Meter-Time:= Time-Remaining: Remaining-Use

1516 ~ Access-Spec := ({SC: Security-Class} {Authorization: Authorization-ID*} {Other-Authorization: Authorization-ID*} {Ticket: Ticket-ID})

1517 ~ Fee-Spec:= {Scheduled-Discount} Regular-Fee-Spec | Scheduled-Fee-Spec | Markup-Spec

1518 ~ Scheduled-Discount:= Scheduled-Discount: (Scheduled-Discount: (Time-Spec Percentage)*)

1519 ~ Regular-Fee-Spec := ({Fee: | Incentive: } [Per-Use-Spec | Metered-Rate-Spec | Best-Price-Spec | Call-For-Price-Spec} {Min: Money-Unit Per: Time-Spec}{Max: Money-Unit Per: Time-Spec} To: Account-ID)

1520 ~ Per-Use-Spec:= Per-Use: Money-unit

1521 ~ Metered-Rate-Spec := Metered: Money-Unit Per: Time-Spec

1522 ~ Best-Price-Spec := Best-Price: Money-unit Max: Money-unit

1523 ~ Call-For-Price-Spec := Call-For -Price

1524 ~ Scheduled-F e-Spec:= (Schedule: (Time-Spec Regular-Fee-Spec)*)

1525 ~ Markup-Spec:= Markup: percentage T : Account-ID

Figure 16

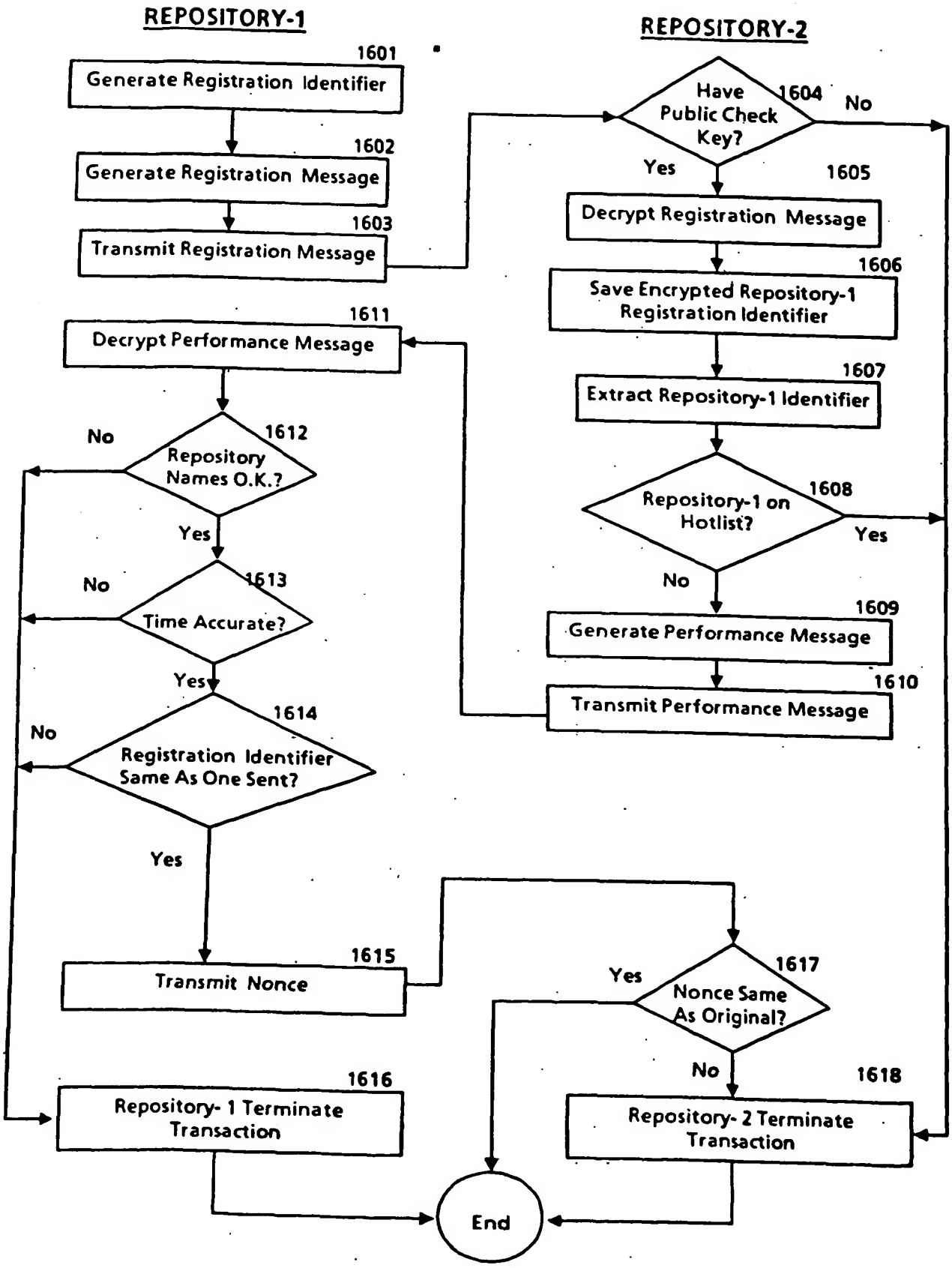
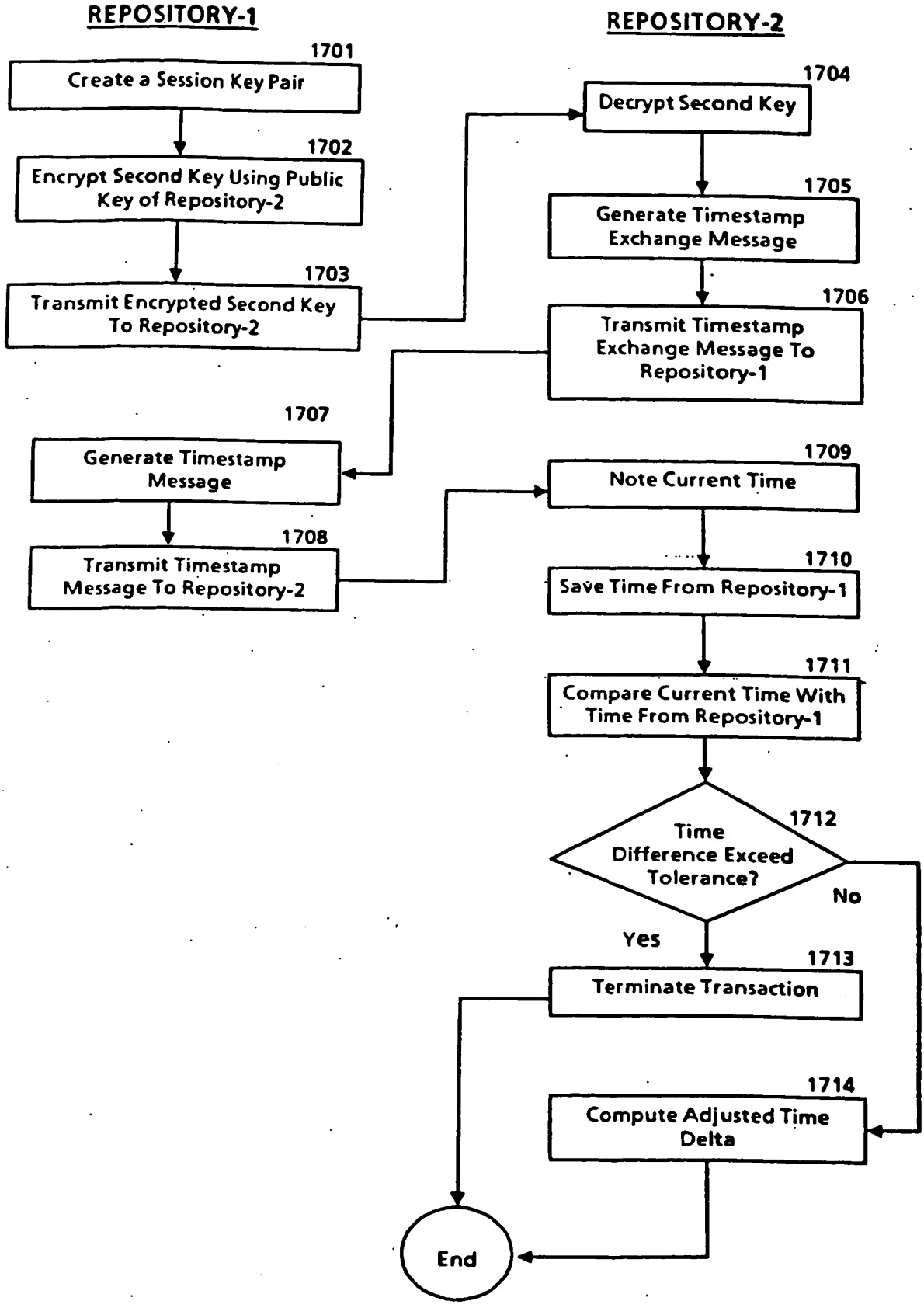

REPOSITORY-1
REPOSITORY-2
1601
Generate Registration Identifier
1602
Generate Registration Message
1603
Transmit Registration Message
1604
Have Public Check Key?
No
Yes
1605
Decrypt Registration Message
1606
Save Encrypted Repository-1 Registration Identifier
1607
Extract Repository-1 Identifier
1608
Repository-1 on Hotlist?
Yes
No
1609
Generate Performance Message
1610
Transmit Performance Message
1611
Decrypt Performance Message
1612
Repository Names O.K.?
No
Yes
1613
Time Accurate?
No
Yes
1614
Registration Identifier Same As One Sent?
No
Yes
1615
Transmit Nonce
1616
Repository- 1 Terminate Transaction
1617
Nonce Same As Original?
Yes
No
1618
Repository- 2 Terminate Transaction
End

Figure 17


REPOSITORY-1
REPOSITORY-2
1701
Create a Session Key Pair
1702
Encrypt Second Key Using Public Key of Repository-2
1703
Transmit Encrypted Second Key To Repository-2
1704
Decrypt Second Key
1705
Generate Timestamp Exchange Message
1706
Transmit Timestamp Exchange Message To Repository-1
1707
Generate Timestamp Message
1708
Transmit Timestamp Message To Repository-2
1709
Note Current Time
1710
Save Time From Repository-1
1711
Compare Current Time With Time From Repository-1
1712
Time Difference Exceed Tolerance?
No
Yes
1713
Terminate Transaction
1714
Compute Adjusted Time Delta
End

Figur 18

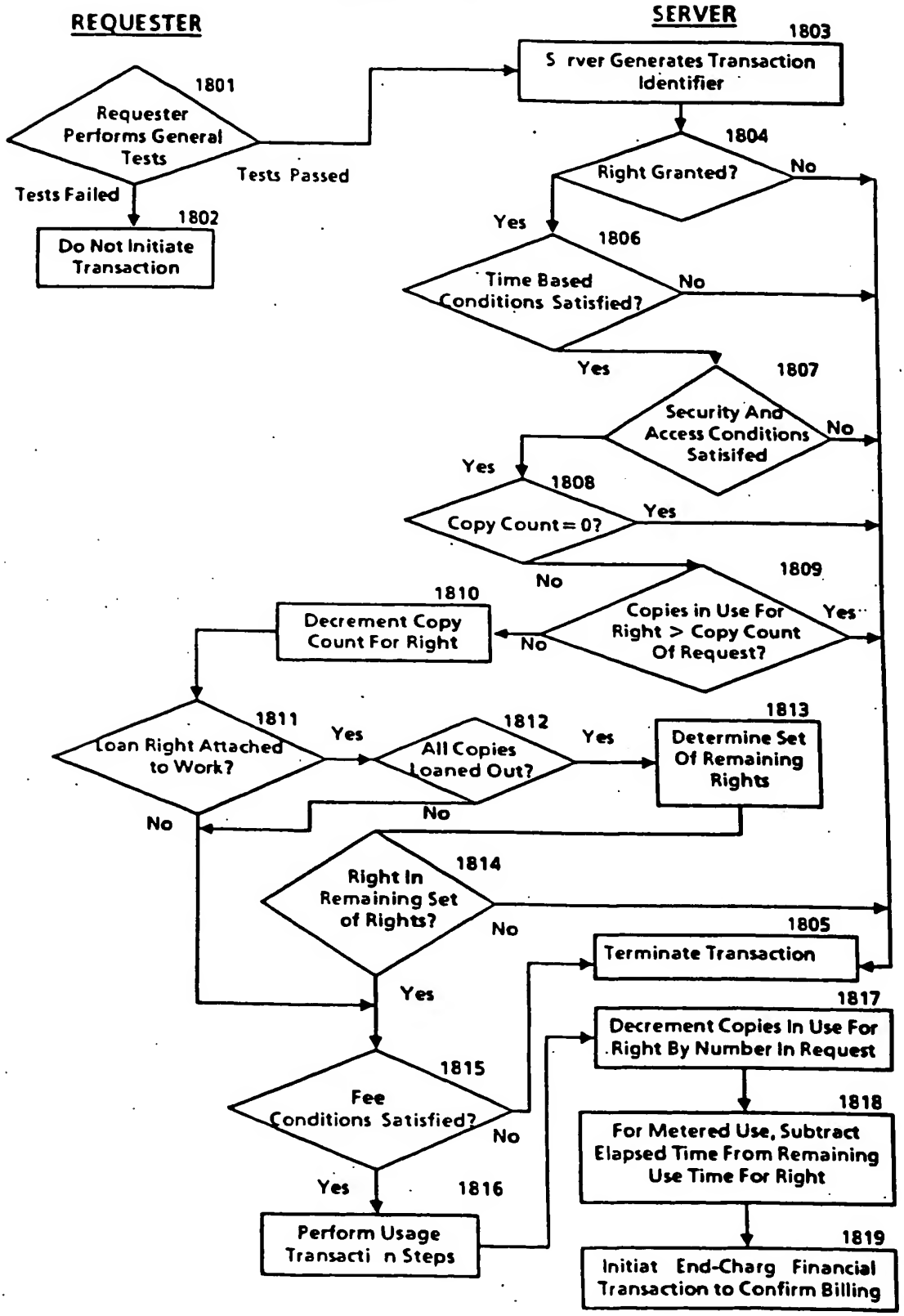
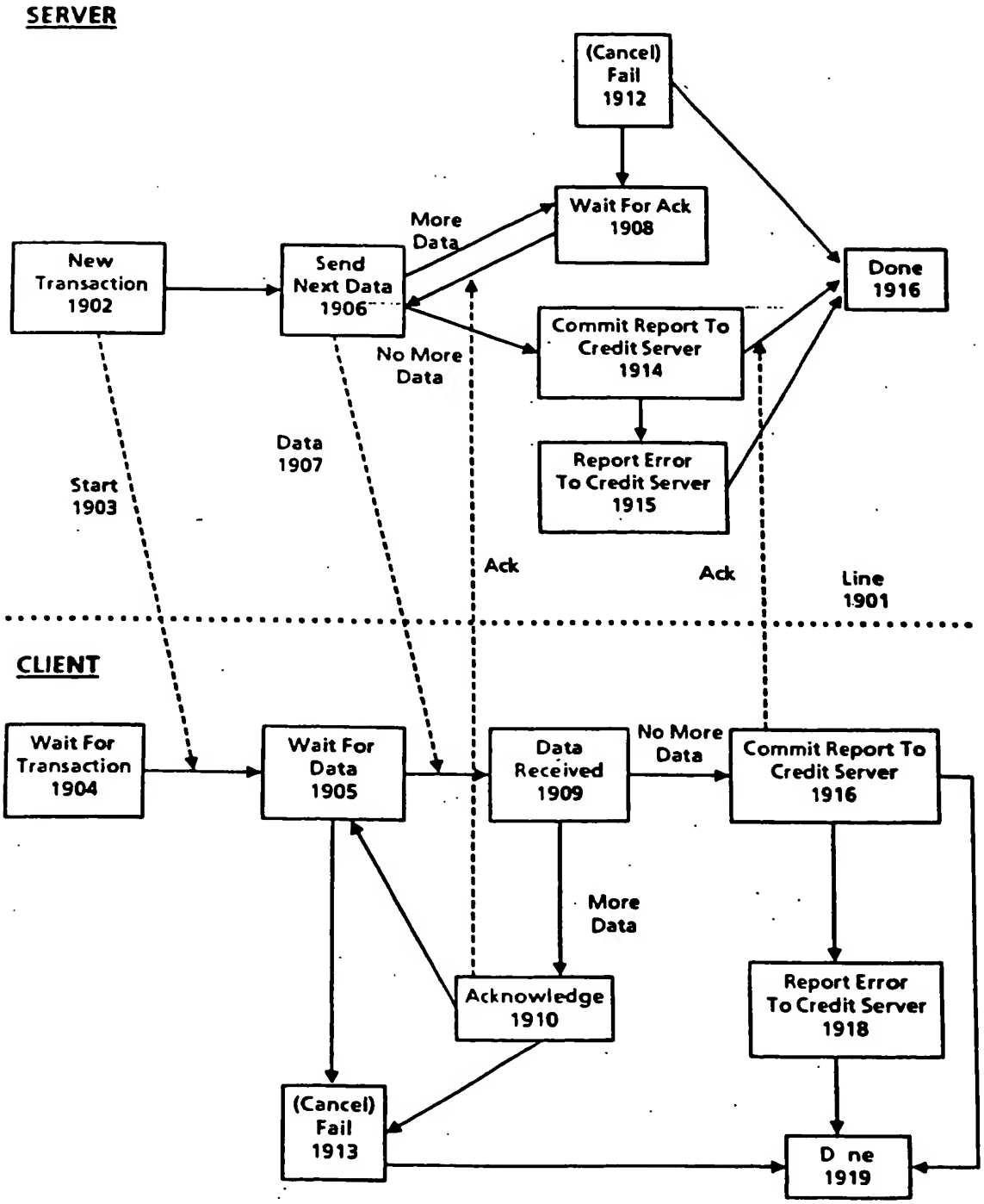

REQUESTER
SERVER
1801
Requester Performs General Tests
Tests Failed
Tests Passed
1802
Do Not Initiate Transaction
1803
S rver Generates Transaction Identifier
1804
Right Granted?
No
Yes
1806
Time Based Conditions Satisfied?
No
Yes
1807
Security And Access Conditions Satisifed
No
Yes
1808
Copy Count = 0?
Yes
No
1809
Copies in Use For Right > Copy Count Of Request?
Yes
No
1810
Decrement Copy Count For Right
1811
Loan Right Attached to Work?
Yes
1812
All Copies Loaned Out?
Yes
1813
Determine Set Of Remaining Rights
No
No
1814
Right In Remaining Set of Rights?
No
1805
Terminate Transaction
Yes
1817
Decrement Copies In Use For Right By Number In Request
1815
Fee Conditions Satisfied?
No
1818
For Metered Use, Subtract Elapsed Time From Remaining Use Time For Right
Yes
1816
Perform Usage Transacti n Steps
1819
Initiat End-Charg Financial Transaction to Confirm Billing

Figure 19


SERVER
(Cancel) Fail 1912
Wait For Ack 1908
More Data
New Transaction 1902
Send Next Data 1906
Done 1916
Commit Report To Credit Server 1914
No More Data
Data 1907
Report Error To Credit Server 1915
Start 1903
Ack
Ack
Line 1901
CLIENT
Wait For Transaction 1904
Wait For Data 1905
Data Received 1909
No More Data
Commit Report To Credit Server 1916
More Data
Acknowledge 1910
Report Error To Credit Server 1918
(Cancel) Fail 1913
D ne 1919